



PAPER SOLUTION

From Meerut

**JEE
MAIN**

JAN

SHIFT

22

1st

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JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If sum of first 4 terms of an A.P is 6 and sum of first 6 terms is 4, then sum of first 12 terms of an A.P is

A -21

B -22

C -23

D -24

(Ans : A)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The number of real solutions of the equations $x|x + 4| + 3|x + 2| + 10 = 0$ is

(Ans : 1)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If $A = \begin{bmatrix} 2 & 3 \\ 3 & 5 \end{bmatrix}$, then the value of $|A^{2025} - 3A^{2024} + A^{2023}|$ is

(Ans : 16)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If the domain of the function

$$\frac{1}{\ln(10-x)} + \sin^{-1}\left(\frac{x+2}{2x+3}\right)$$

is $(-\infty, -a] \cup (-1, b) \cup (b, c)$, then $(b + c + 3a)$ is equal to

A 22

B 24

C 23

D 21

(Ans : 24)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Let $M = \{1, 2, 3, \dots, 16\}$ and R be a relation on M defined by xRy if and only if $4y = 5x - 3$. Then the number of elements required to added in R to make it symmetric is

A 2

B 3

C 4

D 5

(Ans :A)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The solution of the differential equation $xdy - ydx - \sqrt{x^2 + y^2}dx$ is (where c is integration constant)

A $\sqrt{x^2 + y^2} = cx^2 - y$

B $\sqrt{x^2 + y^2} = cx^2 + y$

C $\sqrt{x^2 + y^2} = cx - y$

D $\sqrt{x^2 + y^2} = cx + y$

(Ans : A)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The number of values of x satisfying $\tan^{-1}(4x) + \tan^{-1}(6x) = \frac{\pi}{6}$ and $x \in \left[-\frac{1}{2\sqrt{6}}, \frac{1}{2\sqrt{6}}\right]$ is

- A** 1
- B** 0
- C** 2
- D** 3

(Ans : A)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The value of $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \frac{dx}{[x]+4}$ is

where $[.]$ denotes greatest integer function.

A $\frac{\pi}{20} + \frac{7}{20}$

B $\frac{7\pi}{20} - \frac{7}{20}$

C $\frac{7\pi}{20} - \frac{1}{60}$

D $\frac{7\pi}{20} + \frac{1}{60}$

(Ans : B)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If $\frac{\cos^2 48^\circ - \sin^2 12^\circ}{\sin^2 24^\circ - \sin^2 6^\circ} = \frac{\alpha + \sqrt{5}\beta}{2}$. Then, the value of $(\alpha + \beta)$ is

A 3

B 2

C 4

D 1

(Ans : C)



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#Q. If $\int (\sec x)^{5/2} (\operatorname{cosec} x)^{11/2} dx = \frac{p_1}{q_1} (\cot x)^{9/2} + \frac{p_2}{q_2} (\cot x)^{5/2} + \frac{p_3}{q_3} (\cot x)^{1/2} - \frac{p_4}{q_4} (\cot x)^{-3/2} + c$ (where c is constant of integration), then value of $\frac{15p_1p_2p_3p_4}{q_1q_2q_3q_4}$ is

A 14

B 16

C 10

D 9

(Ans : B)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If the area of the region $\{(x, y): x^2 + 1 \leq y \leq 3 - x\}$ is divided by the line $x = -1$ in the ratio $m:n$ (where m and n are coprime natural numbers). Then, the value of $m + n$ is

(Ans : 27)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If $6 \int_1^x f(t) dt = 3xf(x) + x^3 - 4$, then find the value of $f(2) - f(3)$

(Ans : 3)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If probability distribution is given by

x	0	1	2	3	4	5	6	7
$P(x)$	k	$2k^2$	$6k^2$	$2k^2 + k$	$4k$	k	k	k

Then, the value of $P(3 < x \leq 6)$ is

- A** 0.6
- B** 0.8
- C** 0.4
- D** 0.2

(Ans : A)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The value of α for which the line $\alpha x + 2y = 1$ never touches the hyperbola $\frac{x^2}{9} - \frac{y^2}{1} = 1$ is ?

- A** $R - \left\{ -\frac{\sqrt{5}}{2}, \sqrt{\frac{5}{2}} \right\}$
- B** $R - \{ -\sqrt{5}, \sqrt{5} \}$
- C** $R - \left\{ -\frac{\sqrt{5}}{3}, \frac{\sqrt{5}}{3} \right\}$
- D** R

(Ans : C)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If the image of the point $P(3, 2, a)$ reflected about the line $\frac{x-3}{2} = \frac{y-5}{5} = \frac{z-2}{-2}$ is $(5, b, c)$. Then the value $a^2 + b^2 + c^2$ is

- A** 4849/8
- B** 4245/4
- C** 3947/8
- D** 2429/4

(Ans : A)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The coefficient of x^{48} in

$1 \cdot (1+x) + 2 \cdot (1+x)^2 + 3 \cdot (1+x)^3 + \dots + 100 \cdot (1+x)^{100}$ is

- A** $({}^{101}C_{46}) - 100$
- B** $100({}^{101}C_{46}) - {}^{101}C_{47}$
- C** $100({}^{101}C_{49}) - {}^{101}C_{50}$
- D** ${}^{101}C_{47} - {}^{101}C_{46}$

(Ans : C)



JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If Chord joining two points $(x_1, y_1)(x_2, y_2)$ on the parabola $y^2 = 12x$ subtends an angle of 90° at the vertex of the parabola then $x_1x_2 - y_1y_2 =$

- A** 0
- B** 288
- C** 144
- D** 245

(Ans : B)